REMARKS

ART REJECTIONS

The art rejections are respectfully traversed.

Applicants' prior remarks are incorporated by reference and supplemented as follows.

Any of the Examiner's rejections and/or points of argument that are not addressed below or in the incorporated comments would appear to be moot in view of the following. Nevertheless, Applicants reserve the right to respond to those rejections and arguments and to advance additional arguments at a later date. No arguments are waived and none of the Examiner's statements are conceded.

Why can't a film be readily transported from an x-ray source (Bachman) to a light source/gas discharge lamp (invention)?

One of ordinary skill in the art would not normally look to the x-ray tube field, e.g. Bachman, for technology to be used in the field of gas discharge lamps.

The x-ray situation is one of extremes

- heat, approximately 500 – 800 °C, which requires intermediate materials between the window and the frame. This intermediate layer is discussed throughout the application, *see e.g.* paragraph 0005, line 6 et seq. and paragraphs 0017-0020;
- corrosion from the metal vapors of the liquid metal target;
- high energy electron source (140 KeV – as opposed to 40 KeV in the lamp); and

- pressure: at least 5 bars near the window, but design constraints up to 10-10 bars – in other words, the reference discloses a very high cost window.

High cost materials are tolerable in a professional context, such as the special intermediate layer discussed in the reference00. By contrast, the gas discharge lamp, which is a light source, is to be sold in the consumer context. The high cost window necessary and tolerable in the professional context, would ***not*** be considered suitable by one of ordinary skill for a gas discharge light source that needs to be sold cheaply in a consumer context.

Second, in the Bachman reference, x-rays are generated near the window foil and only those x-rays can leave the system at a reasonable take-off angle for further use, while in the gas discharge lamp, the light is emitted from the discharge vessel – which the x-ray tube does not have.

Third, the window 3 in the reference is two way, with both the electrons and the x-rays going through per paragraph 0034. By way of contrast, in the gas discharge light, the light is emitted throughout the entire discharge tube and only the electrons go through the window.

Given all these differences, the only way one of ordinary skill in the art could arrive at the invention from Bachman would either be undue experimentation involving testing materials in an actual gas discharge lamp or impermissible hindsight in light of Applicants' disclosure – and most likely both of these.

Applicants accordingly respectfully submit that the Examiner's application of the Bachman reference to the present invention is improper.

REMARKS

Wieser

Wieser is cited in the specification as showing a foil between an electron source and a gas discharge vessel; but claims 11-13 recite more. These claims recite that the gas in the discharge vessel produces radiation AND that non-coherent visible light is produced by at least one wall of the discharge vessel in response to that radiation. In Wieser, as far as the undersigned can discern, the gas in the discharge vessel produces VUV light – but no non-coherent visible light is produced by a wall of the discharge vessel.

Applicants accordingly respectfully submit that, while Wieser might have been applicable to the original claims, as then drafted, it is not applicable to claims 11-13. To the extent that the Examiner states that Wieser does show the wall of the discharge vessel emitting non-coherent visible light, the undersigned suspects that the Examiner is mischaracterizing the reference. Where does Wieser show this?

Reconsideration and clarification is respectfully requested.

Wieser/Bachman Combination

One of ordinary skill in the art would not combine Wieser and Bachman. As discussed above, the structure of the Bachman x-ray tube is totally different from the gas discharge lamp situation. The former has a two way window between an evacuated electron source and a high pressure liquid metal target immediately adjacent to the window. The latter has a one way window between an evacuated electron source and a gas filled discharge vessel of relatively low pressure in comparison with the x-ray tube.

The only motivation to combine these two references is by impermissible hindsight in light of the disclosure.

REMARKS

Claims 6 & 7

In rejecting these claims, the Examiner states that cathode 62 has particular properties. Applicants are not finding where the reference says that this cathode has those properties, nor has the Examiner elucidated this point. Clarification is accordingly respectfully requested.

Claims 4, 5, 8-10

These claims recite that the foil is glued, adhered, or brazed to the frame – and claim 8 recites the frame being merely an un-etched portion of the window.

By contrast, in the Bachman reference, due to the extreme thermal expansion that occurs in the x-ray environment, an intermediate material is required, see e.g. paragraph 0005, line 6 et seq. and paragraphs 0017-0020.

Also, glue in particular is destroyed in the extreme conditions of the x-ray tube.

Accordingly the reference fails to teach or suggest that the foil could be so simply attached to the frame as is recited in these claims.

Claim 16

The Examiner states that the Uemura reference teaches using carbon nanotubes to widen the beam; BUT the section cited by the Examiner does not appear to say that the beam is widened, but rather concentrated. Why does the Examiner think that this meets the limitations of the claim?

REMARKS

Statements of the Examiner on p. 9

The Examiner here seems to state that it is not patentable to find a new use for an old device. Applicants respectfully disagree – and moreover respectfully submit that the Examiner's statements in the "Response to Argument" section of the office action are without basis in law.

Effect of Preamble

In the Office Action, the Examiner makes some overly broad statements about the meaning of limitations in the preamble of a claim. There is a discussion of the effect of a preamble in MPEP 2111.02. While Applicants do not necessarily concede that the discussion in the MPEP at this point is entirely legally correct, this MPEP section is certainly much more complex than the Examiner's bald statement that the preamble is not to be accorded legal effect. Applicants respectfully submit that the Examiner's failure to consider the law in this respect and her making of overly broad statements about the legal effect of the preamble are improper – and these are respectfully traversed.

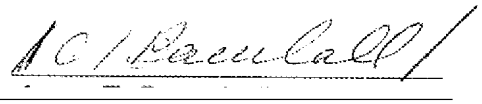
Nevertheless, in an effort to advance prosecution, new claims 17-20 add recitations of the placement of the production of non-coherent visible light from the wall of the discharge vessel into the body of the claims.

Please charge any fees other than the issue fee to deposit account 14-1270. Please credit any overpayments to the same account.

REMARKS

Applicants respectfully submit that they have addressed each issue raised by the Examiner — except for any that were skipped as moot — and that the application is accordingly in condition for allowance. Allowance is therefore respectfully requested.

Respectfully submitted,

By 

Anne E. Barschall, Reg. No. 31,089
Tel. no. 914-332-1019
Fax no. 914-332-7719
Date of printing: October 23, 2007

In house contact at assignee:
Frank Keegan
Reg. No. 50,145
Tel. # 914-333-9669